

# YUVARAJ K

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## SUMMARY

**Cloud, DevOps & GenAI Engineer | Full Stack MERN & .NET Developer** skilled in building **scalable, AI-powered, and cloud-native applications**. Proficient in **LLM integration (OpenAI, Gemini, Hugging Face)**, **CI/CD**, **Kubernetes**, and **laC automation**. Passionate about creating **secure, high-performance, and intelligent systems** that blend **AI innovation** with **modern cloud and full-stack development**.

## EDUCATION

**Dhanalakshmi Srinivasan Engineering College (Autonomous) - Perambalur**  
B.E. Computer Science Engineering - **9.13 CGPA**

Oct 2021 – May 2025

## PROFESSIONAL EXPERIENCE

**RedSun Innovations Technologies Pvt Ltd, Tuticorin, TN: Cloud DevOps Intern**

Dec 2024 – June 2025

- Guided the **senior DevOps engineer at Everway (UK)** on **automation** and **Cloud infra optimization**.
- Managed **AWS infrastructure** with **Terraform** (tfstate per env); built 5+ reusable **modules** and managed **IAM access** for 20+ teams across 50+ users using **AWS Identity Center**.
- Created 2+ reusable **CI/CD templates** in **Azure DevOps** for **.NET and NodeJS backend microservices**, cutting setup time for **Developer team by 60%**.
- Automated the **audits** of RDS/Beanstalk for **.NET and MERN Stack applications** across 10+ AWS accounts using shell scripts; enforced custom **WAF rules**.
- Collaborated with a **Principal DevOps Engineer at Pega Systems (Poland)** to set up a **Grafana dashboard** for monitoring **GCP Vertex and Gemini AI services**.

**BillionBytes, Perambalur, Tamilnadu: Full-Stack Intern**

Sept 2024 – Nov 2024

- Set up **GitHub Actions** for **MERN Stack** repos and Docker workflows; fixed 10+ **Docker issues** and boosted CI speed by 25%.

## TECHNICAL SKILLS

**Cloud Computing:** AWS, Azure

**Database:** MySQL, PostgreSQL, MongoDB

**Development:** JavaScript, NodeJS, ExpressJS, ReactJS, .NET Core, MVC, Web API, EF Core, RESTful API

**GenAI ML Tools:** OpenAI API, Hugging Face, TensorFlow, PyTorch, FastAPI, MLflow, Prompt Engineering

**DevOps Tools:** Linux, Git, Docker, Kubernetes, Terraform, Prometheus, Grafana, GitHub Actions, Azure DevOps, Kafka, ArgoCD, ELK Stack, Snyk Scan, Postman, Python, Golang, Bash, PowerShell, YAML

## CERTIFICATIONS

**AWS Academy Cloud Architecting:** AWS Academy Graduate

**Cyber Threat Management:** Cisco networking Academy

**Cloud Practitioner:** AWS Cloud Quest (AWS Skill Builder)

**Networking Basics:** Cisco networking Academy

## PROJECTS

### 1. DevSecOps Project – Random Quote Generator

Developed a microservices app that generates random anime quotes with automated **CI/CD Pipeline**, **security scanning**, **GitOps** deployment on **Kubernetes** and **secret management** via HashiCorp Vault. Integrated **monitoring** with Grafana

- **Tech stack:** HTML, CSS, JS, Go, Terraform, Docker, Snyk Scan, Grafana, GitHub Actions, HashiCorp Vault, ArgoCD, Slack, AWS (EC2, CloudWatch, VPC, EKS).
- GitHub Repository link - **GitHub**

### 2. Hybrid Model Based Lung Cancer Prediction using Histopathology Images

Deployed **DL Models (EfficientNet, ResNet, DenseNet)** and **LLM Models (BioGPT)** on Minikube using **Docker**, with system monitoring via Prometheus and Grafana for scalable and observable AI-driven cancer prediction.

- **Tech stack:**Python, PyTorch, TensorFlow, EfficientNet, ResNet, DenseNet, BioGPT, Docker, Minikube, Prometheus, Grafana, FlaskAPI, Helm, Jupyter Notebook
- GitHub Repository link - **GitHub**

### 3. Ethereum-Based KYC Verification Framework

**Decentralized KYC verification system** on a **private Ethereum blockchain** to automate identity **checks**, **enhance security**, and improve bank customer onboarding. Streamlines processes using **smart contracts**, **PoA consensus**, and **real-time monitoring**.

- **Tech stack:**Private Ethereum Blockchain, Solidity (Smart Contracts), Geth, MetaMask, Ether.js, Docker, Minikube, Prometheus, Grafana
- GitHub Repository link - **GitHub**

### 4. SecureEdgeOps – Cloud-Native Threat Detection Mitigation

Built a cloud-native security solution that detects and **blocks malicious IPs** in real time using **honeypots** and **AWS WAF automation**. Integrated end-to-end **monitoring**, **logging** and **AWS-native automation** for over 35% improved network security.

- **Tech stack:**AWS S3, CloudFront, WAF, Lambda, CloudTrail, EventBridge, Systems Manager Parameter Store, Suricata, Wazuh, Terraform, Nmap
- GitHub Repository link - **GitHub**

### 5. MovieWatchList – Full-Stack .NET Application

Full-stack Movie Watchlist app to **view**, **add**, **edit**, and **manage** movies. Backend uses **ASP.NET Core Web API** for **CRUD Operations** with **EF Core for database management and migrations** and **automated tests**; frontend uses **Next.js** for a modern responsive interface.

- **Tech stack:**Next.js, React, ASP.NET Core Web API, EF Core, PostgreSQL, Docker, xUnit
- GitHub Repository link - **GitHub**

### 6. Log Analysis System (Kafka-Based)

**Scalable log analysis system** with **login and register microservices**. Processes real-time user activity **logs via Kafka** and stores them in MongoDB. Deployable on **Kubernetes** with Helm and **automated via Terraform**.

- **Tech stack:**Go (Web API Microservices), MongoDB, Kafka, Helm, Terraform, Minikube
- GitHub Repository link - **GitHub**

### 7. Elastic-Cloud-Solution

A **resilient** and **scalable cloud architecture** using **VPC peering**, **shared storage**, **auto scaling**, and load balancing. Enables secure **cross-VPC communication**, **dynamic resource management**, and seamless access to private instances via Session Manager. Demonstrated both through the management console and **IaC automation**.

- **Tech stack:**AWS (VPC Peering, EFS, SSM, EC2, ALB), Shell Scripts,Terraform.
- GitHub Repository link - **GitHub**